

Brief History

Significant Dates

Discontinued sluicing bottom ash to CCR units (i.e., ponds) at both JRPS/JTEC – prior to 10/19/2015

Certified intent to close ponds at both sites/closure by removal – 12/14/2015

Permitted (permit modification) to burn natural gas only at James River Power Station – 1/29/2016

Removed all wastewater, ash, liner materials at John Twitty Energy Center – prior to 9/30/2016

Certified closure verification/completed at John Twitty Energy Center – 11/25/2016 (updated 4/4/2017)

Annual Closure Progress Report completed and posted for both sites – 1/12/2017

Removed all wastewater, ash, liner materials at James River Power Station – prior to 6/30/2017

Certified closure verification/completed at James River Power Station – 8/8/2017

Aerial View JTEC Site



Temporary Holding Pond
(CCR Unit) – Two Cells

Landfill

al

C

WW-PZ-010

WW-PZ-150

Reactor Station

WW-PZ-000

WW-PZ-050

WW-CA-4

WW-CA-3

WW-PZ-100

WW-PZ-110

WW-CA-2A

WW-PZ-02

WW-PZ-030

003235.7623 07/09/2012

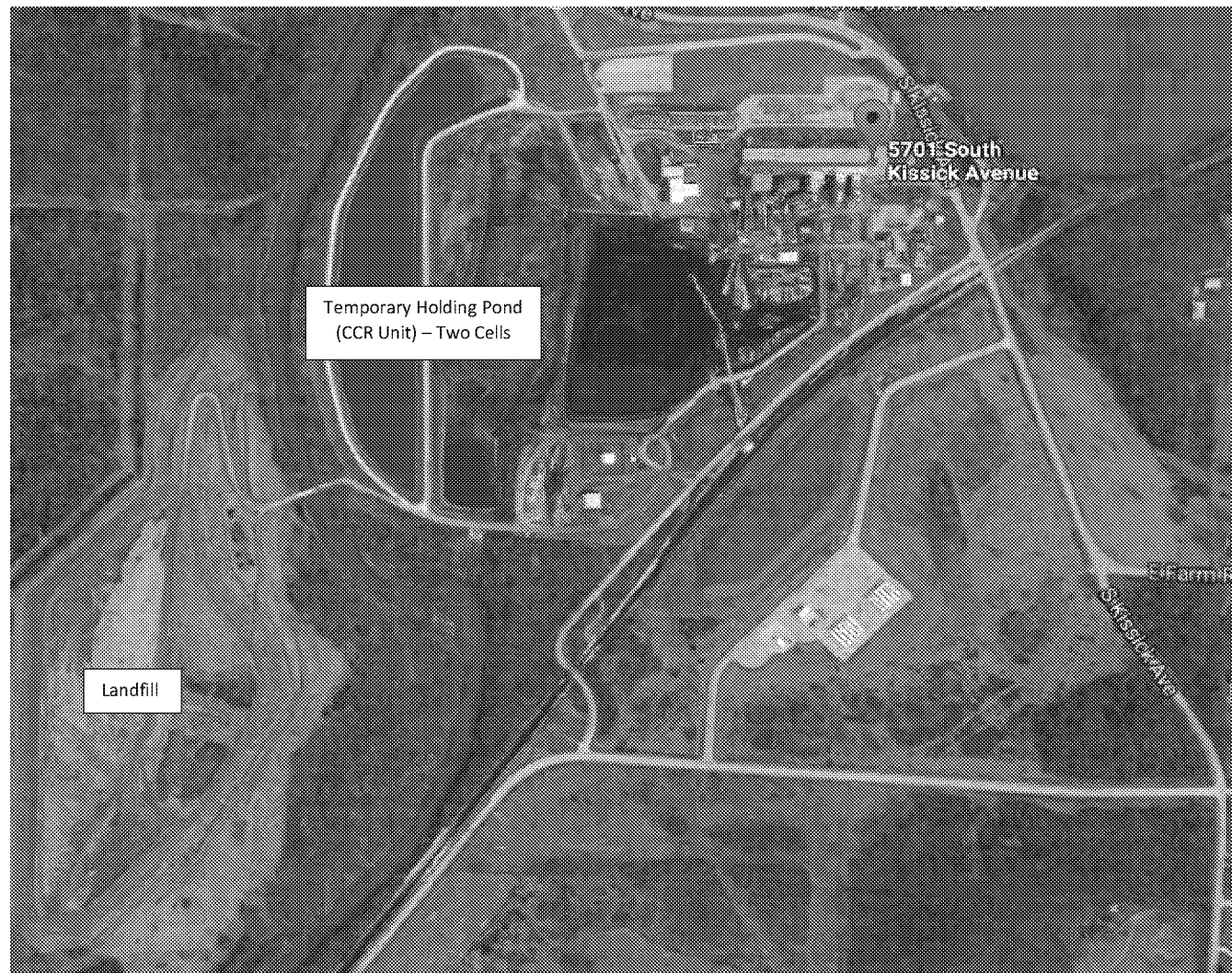
JTEC Before



JTEC After



Aerial View JRPS Site





JRPS Before



JRPS After



JRPS After



John Twitty Energy Center
Temporary Holding Pond Clean Closure Verification

1. Description

The JTEC site is owned and operated by City Utilities of Springfield, Missouri, and is located west of the city. The plant consists of dual-fueled (coal or natural gas) boilers. Originally, bottom ash was sluiced to two 7-9 acre on-site temporary holding ponds. The ash was stored in the ponds until an appreciable volume was reached. The ponds were drained and the ash excavated and placed within the on-site permitted landfill. Both ponds were originally constructed with a clay liner. After the last cleaning additional clay was placed in the east pond.

City Utilities decided to close the temporary holding ponds at John Twitty Energy Center (JTEC) by removing all of the coal combustion residuals (CCR) from the surface impoundments. This was accomplished in accordance with the construction drawings and specifications under PO 131771. The liners were also removed as a part of the excavation of the ponds.

The ponds were verified clean by the process described in the document titled "Clean Closure Verification of CCR Temporary Holding Ponds" which is located in the site Operating Record. The document describes the method of determining the complete removal of CCR within the ponds and the handling and testing performed to accomplish the verification.

This verification is for both the east and west temporary holding ponds (See Attachment A for a revised grid drawing showing samples locations for this verification).

The following table is a summary of the results from the testing. Test result data information can be seen in Attachment B.

SAMPLE ID	RESULT
JTEC 1-C	0
JTEC 1-D	1
JTEC 2-B	6
JTEC 2-C	2
JTEC 2-D	0
JTEC 2-F	1
JTEC 2-E	3
JTEC 2-G	17
JTEC 2-H	0
JTEC 3-B	3
JTEC 3-D	4
JTEC 3-C	0
JTEC 3-F	4
JTEC 3-E	0
JTEC 3-G	2
JTEC 3-H	1
JTEC 3-J	2
JTEC 4-C	0
JTEC 4-D	0
JTEC 4-G	1
JTEC 4-H	2

SAMPLE ID	RESULT
JTEC 5-G	0
JTEC 5-H	0
JTEC 5-J	6
JTEC 6-C	1
JTEC 6-D	0
JTEC 6-H	0
JTEC 6-J	0
JTEC 7-D	1
JTEC 8-E	0
JTEC 8-F	13
JTEC 6-F	1
JTEC 6-D	0
JTEC 6-G	0
JTEC 6-E	0
JTEC 8-E	0
JTEC 8-D	3
JTEC 7-H	0
JTEC 7-E	3
JTEC 8-G	2
JTEC 7-G	0
JTEC 7-F	2

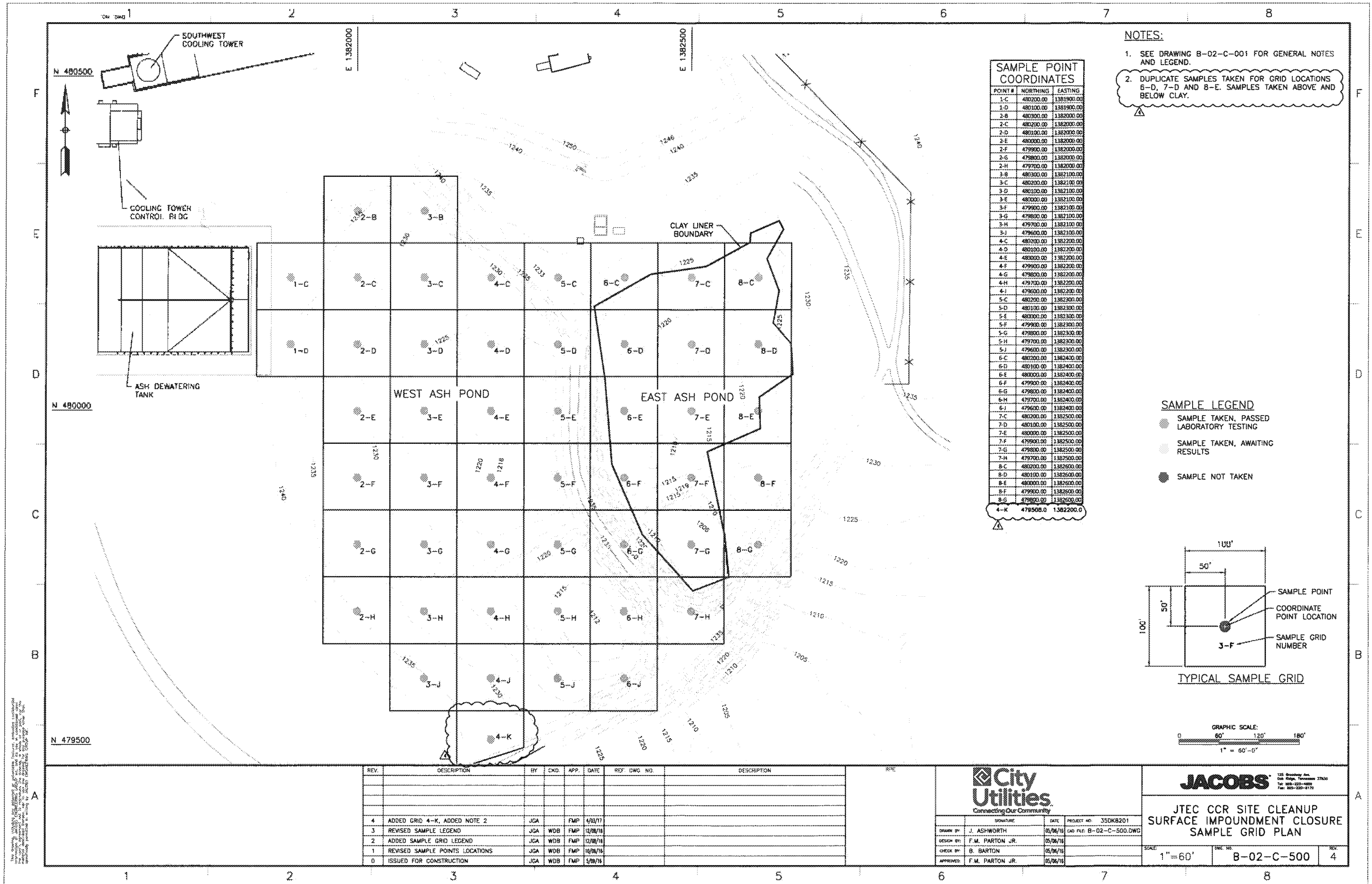
**John Twitty Energy Center
Temporary Holding Pond Clean Closure Verification**

JTEC 4-K	9
JTEC 4-E	0
JTEC 4-F	3
JTEC 4-J	1
JTEC 5-C	1
JTEC 5-D	1
JTEC 5-E	0
JTEC 5-F	0

JTEC 8-C	1
JTEC 7-D	0
QC01 JTEC 3-B	3
QC02 JTEC 4-G	2
QC03 JTEC 5-G	1
QC04 JTEC 8-F	10
QC JTEC 7-G	2
JTEC 7-C	1

Sample IDs starting with QC are laboratory quality control tests.

**ATTACHMENT A
JTEC Grid Drawing**



**ATTACHMENT B
JTEC Test Results**

October 4, 2016

Jeff Farah
Jacobs Engineering Group Inc.
501 N. Broadway
St. Louis, MO 63102-2131

RE: Jacobs Engineering Group Project – City Utilities of Springfield
RJ Lee Group Project Number AOH1042706-0

Dear Mr. Farah,

The RJ Lee Group, Inc. Monroeville laboratory received 39 samples on September 20, 2016 associated with Jacobs Engineering Group Inc. job number 35DK8201. The samples were logged into RJ Lee Group project number AOH1042706-0 and assigned RJLG sample numbers as indicated in Appendix A.

The samples were received in good condition with all custody seals in place and intact. Attached in Appendix A is the signed sample receipt confirmation form, COC, and sample receipt check list.

If you have any questions or comments regarding the information contained in this report, please feel free to contact us.

These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted.

Sincerely,



Bryan R. Bandli, PhD
Principal Investigator

Attachments: Chain of Custody Forms
Mineral Identification Report
Method Blank and Reference Mount Data
Polarized Light Microscopy Images, Bench Sheets,
QC Tabulation (when applicable)

WWW.RJLG.COM

350 Hochberg Road, Monroeville, PA 15146 | PH: 724.325.1776 | F: 724.733.1799

James River Power Station
Temporary Holding Ponds Clean Closure Verification

1. Description

The James River Power Station (JRPS) site is owned and operated by City Utilities of Springfield, Missouri, and is located south of the city along the James River. The plant consists of five dual-fueled units (coal or natural gas) that are currently permitted to burn only natural gas. Prior to 2016, when the facility was in operation with coal firing, coal combustion residuals (CCR) were sluiced to two on-site temporary holding ponds. CCR was temporarily stored in the ponds until a specific volume was reached. The ponds were then drained and the CCR excavated and placed within the on-site utility waste landfill permitted by Missouri Department of Natural Resources.

City Utilities has closed the temporary holding ponds at JRPS by removing all visible CCR from the temporary holding ponds, and removing the pond liners. This was accomplished in accordance with the construction drawings and specifications under PO 131771. Closure of the west pond and outer embankment was completed (including verification sampling and analysis described below) by February 23, 2017. The east pond closure was completed on June 20, 2017. Final slopes will be contoured and vegetative cover established.

The east and west pond areas were cleaned and verified in the following order: west pond bottom, west pond outer berm, and then the east pond. Clean closure verification followed the procedures outlined in the document titled "Clean Closure Verification of CCR Holding Ponds, April 2016" This plan describes the method of determining the removal of CCR, sample collection and handling, and analysis using Polarized Light Microscopy (PLM) to complete the verification process. This method was used and approved by EPA for clean-up of CCR releases during the TVA Kingston project. A copy of the plan is located in the site Operating Record.

Attachment A includes a diagram depicting the subsoil sampling locations. Grid sample location 1-G, 3-F, 15-F, 17-G, 18-G, 19-G and 19-M were not sampled as these locations fell outside the limits of CCR materials. The values in the table below represent the percentage of CCR material in the subsoil samples. A total of 150 samples were collected, and in most cases single digit percentages of CCR remained in the sample matrix. The results ranged from zero to 33 percent, with the overall average being five percent. Test data information is included in Attachment B. Data Validation Reports are located in Appendix C of this document.

SAMPLE_ID	RESULT (%)
JRPS 4-E	2
JRPS 5-E	9
JRPS 6-E	23
JRPS 7-E	5
JRPS 8-E	3
JRPS 4-F	2
JRPS 5-F	7
JRPS 6-F	18
JRPS 7-F	3
JRPS 8-F	6
JRPS 9-F	0
JRPS 10-F	5
JRPS 11-F	5
JRPS 12-F	1
JRPS 13-F	17

SAMPLE_ID	RESULT (%)
JRPS 2-G	5
JRPS 3-G	4
JRPS 4-G	0
JRPS 5-G	2
JRPS 6-G	4
JRPS 7-G	1
JRPS 8-G	4
JRPS 9-G	2
JRPS 10-G	6
JRPS 11-G	5
JRPS 12-G	4
JRPS 13-G	2
JRPS 14-G	0
JRPS 15-G	0
JRPS 16-G	1

James River Power Station
Temporary Holding Ponds Clean Closure Verification

SAMPLE_ID	RESULT (%)
JRPS 14-F	12
JRPS 2-H	4
JRPS 3-H	3
JRPS 4-H	2
JRPS 5-H	2
JRPS 6-H	1
JRPS 7-H	2
JRPS 8-H	2
JRPS 9-H	6
JRPS 10-H	2
JRPS 11-H	5
JRPS 12-H	1
JRPS 13-H	0
JRPS 14-H	5
JRPS 15-H	20
JRPS 16-H	8
JRPS 17-H	7
JRPS 18-H	8
JRPS 19-H	10
JRPS 1-J	4
JRPS 2-J	4
JRPS 3-J	6
JRPS 4-J	1
JRPS 5-J	1
JRPS 6-J	3
JRPS 7-J	2
JRPS 8-J	14
JRPS 9-J	5
JRPS 10-J	1
JRPS 11-J	6
JRPS 12-J	1
JRPS 13-J	2
JRPS 14-J	1
JRPS 15-J	4
JRPS 16-J	24
JRPS 17-J	19
JRPS 18-J	21
JRPS 19-J	1
JRPS 1-K	8
JRPS 2-K	7

SAMPLE_ID	RESULT (%)
JRPS 1-H	3
JRPS 4-K	9
JRPS 5-K	13
JRPS 6-K	11
JRPS 7-K	14
JRPS 8-K	8
JRPS 9-K	3
JRPS 10-K	4
JRPS 11-K	11
JRPS 12-K	0
JRPS 13-K	4
JRPS 14-K	5
JRPS 15-K	8
JRPS 16-K	1
JRPS 17-K	1
JRPS 18-K	4
JRPS 19-K	4
JRPS 1-L	5
JRPS 2-L	13
JRPS 3-L	6
JRPS 4-L	3
JRPS 5-L	1
JRPS 6-L	1
JRPS 7-L	3
JRPS 8-L	2
JRPS 9-L	14
JRPS 10-L	9
JRPS 11-L	9
JRPS 12-L	2
JRPS 13-L	8
JRPS 14-L	1
JRPS 15-L	3
JRPS 16-L	1
JRPS 17-L	0
JRPS 18-L	8
JRPS 19-L	3
JRPS 2-M	1
JRPS 3-M	4
JRPS 4-M	25
JRPS 5-M	4

**James River Power Station
Temporary Holding Ponds Clean Closure Verification**

SAMPLE_ID	RESULT (%)
JRPS 3-K	1
JRPS-7-M	2
JRPS-8-M	0
JRPS-9-M	1
JRPS-10-M	5
JRPS-11-M	2
JRPS-12-M	2
JRPS-13-M	0
JRPS-14-M	2
JRPS-15-M	0
JRPS-16-M	1
JRPS-17-M	2
JRPS 18-M	0
JRPS 4-N	11
JRPS 5-N	21
JRPS 6-N	33
JRPS-7-N	0
JRPS-8-N	1
JRPS-9-N	2
JRPS-10-N	1
JRPS-11-N	3
JRPS-12-N	4
JRPS-13-N	1

SAMPLE_ID	RESULT (%)
JRPS-6-M	6
JRPS-14-N	2
JRPS-15-N	1
JRPS-16-N	0
JRPS 17-N	5
JRPS 18-N	4
JRPS 6-O	0
JRPS 7-O	4
JRPS 8-O	0
JRPS 9-O	13
JRPS 10-O	5
JRPS 11 - O	6
JRPS 12-O	5
JRPS 13-O	11
JRPS 14-O	9
JRPS 15-O	15
JRPS 16-O	5
QC01 JRPS 1-H	1
QC02 JRPS 4-L	1
QC03 JRPS 14-L	2
QC04 JRPS 10-M	3
QC05 JRPS 9-N	2
QC _ JRPS 8-O	0

Sample IDs starting with QC are laboratory quality control tests.

ATTACHMENT A
JRPS Grid Drawing

ON DWG 1

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NOTES:

1. SEE DRAWING A-02-C-001 FOR GENERAL NOTES AND LEGEND.
2. SEE DRAWING A-02-500 FOR SAMPLE GRID PLAN.

SAMPLE POINT COORDINATES

POINT #	NORTHING	EASTING	POINT #	NORTHING	EASTING	POINT #	NORTHING	EASTING
1G	485633.33	1417733.33	7M	464860.00	1417250.00	13K	464450.00	1417450.00
1H	465650.00	1417650.00	7N	465050.00	1417350.00	13L	464450.00	1417350.00
1J	465650.00	1417550.00	7O	465050.00	1417250.00	13M	464450.00	1417250.00
1K	465650.00	1417450.00	7P	464850.00	1417150.00	13N	464450.00	1417150.00
1L	485633.33	1417350.67	7Q	464850.00	1417050.00	13O	464450.00	1417050.00
2G	465650.00	1417750.00	8M	464950.00	1417750.00	14K	464350.00	1417650.00
2H	465650.00	1417650.00	8N	464950.00	1417650.00	14L	464350.00	1417550.00
2J	465650.00	1417550.00	8P	464950.00	1417550.00	14M	464350.00	1417450.00
2K	465650.00	1417450.00	8Q	464950.00	1417450.00	14N	464350.00	1417350.00
2L	465650.00	1417350.00	8R	464950.00	1417350.00	14O	464350.00	1417250.00
2M	485633.43	1417253.35	8S	464950.00	1417250.00	14P	464350.00	1417150.00
3F	465450.00	1417850.00	8T	464950.00	1417150.00	14Q	464350.00	1417050.00
3G	465450.00	1417750.00	8U	464950.00	1417050.00	14R	464350.00	1416950.00
3H	465450.00	1417650.00	8V	464950.00	1416950.00	14S	464350.00	1416850.00
3J	485450.00	1417550.00	8W	464850.00	1417850.00	14T	464250.00	1417750.00
3K	465450.00	1417450.00	8X	464850.00	1417750.00	14U	464250.00	1417650.00
3L	465450.00	1417350.00	8Y	464850.00	1417650.00	14V	464250.00	1417550.00
3M	485444.44	1417251.11	8Z	464850.00	1417550.00	14W	464250.00	1417450.00
4E	465350.00	1417950.00	9L	464850.00	1417450.00	14X	464250.00	1417350.00
4F	465350.00	1417850.00	9M	464850.00	1417350.00	14Y	464250.00	1417250.00
4G	465348.38	1417756.94	9N	464850.00	1417250.00	14Z	464250.00	1417150.00
4H	465350.00	1417650.00	9O	464850.00	1417150.00	14AA	464250.00	1417050.00
4J	465350.00	1417550.00	9P	464750.00	1417850.00	14AB	464150.00	1417950.00
4K	465350.00	1417450.00	9Q	464750.00	1417750.00	14AC	464150.00	1417850.00
4L	465350.00	1417350.00	9R	464750.00	1417650.00	14AD	464150.00	1417750.00
4M	465350.00	1417250.00	9S	464750.00	1417550.00	14AE	464150.00	1417650.00
4N	465338.43	1417188.35	9T	464750.00	1417450.00	14AF	464150.00	1417550.00
5E	465250.00	1417950.00	10L	464750.00	1417350.00	14AG	464150.00	1417450.00
5F	465250.00	1417850.00	10M	464750.00	1417250.00	14AH	464150.00	1417350.00
5G	465250.00	1417750.00	10N	464750.00	1417150.00	14AI	464150.00	1417250.00
5H	465250.00	1417650.00	10O	464750.00	1417050.00	14AJ	464150.00	1417150.00
5J	465250.00	1417550.00	10P	464650.00	1417850.00	14AK	464050.00	1417950.00
5K	465250.00	1417450.00	10Q	464650.00	1417750.00	14AL	464050.00	1417850.00
5L	465250.00	1417350.00	10R	464650.00	1417650.00	14AM	464050.00	1417750.00
5M	465250.00	1417250.00	10S	464650.00	1417550.00	14AN	464050.00	1417650.00
5N	465250.00	1417150.00	10T	464650.00	1417450.00	14AO	464050.00	1417550.00
6E	465150.00	1417950.00	11L	464650.00	1417350.00	14AP	464050.00	1417450.00
6F	465150.00	1417850.00	11M	464650.00	1417250.00	14AQ	464050.00	1417350.00
6G	465150.00	1417750.00	11N	464650.00	1417150.00	14AR	464050.00	1417250.00
6H	465150.00	1417650.00	11O	464650.00	1417050.00	14AS	464050.00	1417150.00
6J	465150.00	1417550.00	11P	464550.00	1417850.00	14AT	463950.00	1417950.00
6K	465150.00	1417450.00	11Q	464550.00	1417750.00	14AU	463950.00	1417850.00
6L	465150.00	1417350.00	11R	464550.00	1417650.00	14AV	463950.00	1417750.00
6M	465150.00	1417250.00	11S	464550.00	1417550.00	14AW	463950.00	1417650.00
6N	465150.00	1417150.00	11T	464550.00	1417450.00	14AX	463950.00	1417550.00
6O	485138.28	1417088.35	12L	464550.00	1417350.00	14AY	463950.00	1417450.00
7E	465050.00	1417950.00	12M	464550.00	1417250.00	14AZ	463850.00	1417950.00
7F	465050.00	1417850.00	12N	464550.00	1417150.00	14BA	463850.00	1417850.00
7G	465050.00	1417750.00	12O	464550.00	1417050.00	14BB	463850.00	1417750.00
7H	465050.00	1417650.00	12P	464450.00	1417850.00	14BC	463850.00	1417650.00
7J	465050.00	1417550.00	12Q	464450.00	1417750.00	14BD	463850.00	1417550.00
7K	465050.00	1417450.00	12R	464450.00	1417650.00	14BE	463850.00	1417450.00
7L	465050.00	1417350.00	12S	464450.00	1417550.00	14BF	463850.00	1417350.00

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REV.	DESCRIPTION	BY	CHKD.	APP.	DATE	REF. DWG. NO.	DESCRIPTION	R/E	 Connecting Our Community	PROJECT NO. 350K8201 DWG FILE: A-02-C-501.DWG	 155 Broadway Ave. Oak Ridge, Tennessee 37830 Tel: 865-576-4800 Fax: 865-576-5170	JRPS CCR SITE CLEANUP SURFACE IMPOUNDMENT CLOSURE SAMPLE POINT COORDINATES	SCALE: NONE	DWG. NO. A-02-C-501	REV. 1
1	REVISED COORDINATE TABLE	JGA		FMP											
0	ISSUED FOR CONSTRUCTION	JGA	WOB	FMP	5/8/18										

ATTACHMENT B

JRPS Test Results
Level IV Results

November 15, 2016

Jeff Farah
Jacobs Engineering Group Inc.
501 N. Broadway
St. Louis, MO 63102-2131

RE: Jacobs Engineering Group Project – City Utilities of Springfield
RJ Lee Group Project Number AOH1042706-4

Dear Mr. Farah,

The RJ Lee Group, Inc. Monroeville laboratory received 49 samples on November 2, 2016 associated with Jacobs Engineering Group Inc. job number 35DK8201. The samples were logged into RJ Lee Group project number AOH1042706-4 and assigned RJLG sample numbers as indicated in Appendix A.

The samples were received in good condition with all custody seals in place and intact. Attached in Appendix A is the signed sample receipt confirmation form, COC, and sample receipt check list.

If you have any questions or comments regarding the information contained in this report, please feel free to contact us.

These results are submitted pursuant to RJ Lee Group's current terms and conditions of sale, including the company's standard warranty and limitation of liability provisions. No responsibility or liability is assumed for the manner in which the results are used or interpreted.

Sincerely,



Bryan R. Bandli, PhD
Principal Investigator

Attachments: Chain of Custody Forms
Mineral Identification Report
Method Blank and Reference Mount Data
Polarized Light Microscopy Images, Bench Sheets,
QC Tabulation (when applicable)